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Getting the Picture: Using Visual Learning Techniques to Foster Higher Order Thinking Skills and Encourage Connections in the Secondary Classroom

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A large percentage of the students in my Alternative High School setting are visual-spatial learners who have never been classified with a learning disability. Their needs were not met in traditional secondary settings because of their inability to process standard lecture classroom formats. In an attempt to see what effect accommodating visual learners would have on the curriculum, I reworked the way I taught one class: English IA, Greek Mythology. With a few minor changes/ accommodations, students who were visual learners experienced considerably more success in the class than they had previously, as did other students in the class. This article will focus primarily on the one teaching strategy that had the largest impact on student success: Greek god and goddess trading cards.

Part I: Recognizing the Problem.

I was hired to teach at Portage Community High School six years ago, having never even visited an alternative education setting before. The school was set in a suburban area and had approximately 240 students enrolled, ranging in age from 11 years old to adults. Students were placed in classes according to ability levels, producing multi-age classroom environments, with the exception of the middle school and transition (freshmen) programs. Each student had a different reason for choosing an alternative high school, from teen parenthood to truancy to "just not fitting in" at traditional high schools.

My administrator, Mike Hinga, gave me some words of advice as he walked me to my classroom on the first day. I forgot quite a few of the words said that morning, but remembered one phrase quite clearly: "Most of these students had success in elementary school, but then found out that middle and high school just didn't work for them."

At the time I found the comment interesting, and filed it away for later consideration. What was different? Where did things go astray for these kids? There were so many possibilities. Was the work too hard? Like many new teachers, I had confused level-appropriateness with difficulty. I soon discovered that wasn't the case. Many of my students were bright, intelligent, and inquisitive. They wanted to be challenged and lost interest if they weren't. Was it homework? We functioned on block schedules, so homework became a non-issue, as students were given class time to do assignments, yet there was still a significant percentage of students failing my classes.

One December night after final grades, I decided to get to the bottom of the issue. I had been teaching for four years with moderate success. How could I improve the success rates of my students? Why did the success of elementary school disappear at a secondary level? I began to brainstorm, listing the qualities of an elementary classroom vs. those of a secondary classroom. There were a lot of differences and very few things in common. My lists grew longer. I checked off the things I had already tried, but three items listed under elementary caught my eye: *Kids can draw out their ideas*, *Directions clearly written for everything*, and *Students write*

things out until they get it. These things were suspiciously absent from the secondary side of teaching as well as my own teaching thus far.

I thought of Alan* (a pseudonym), a student in my World Mythology class. He came to our alternative high school for a lot of small reasons, one of which was that his teachers complained that he wasn't ever paying attention in class. During our readings, he always seemed to be off-task, usually drawing elaborate scenes of comic book heroes, video game characters, or racing cars. Somehow, he always seemed to have the right answer to questions, though, and always contributed to classroom discussions.

On the day that I knew I was going to be observed by my principal, I asked Alan to try reading along with us rather than drawing. He didn't retain much of the story, even though he paid attention the entire time. He answered none of the oral questions, and the written work over the reading was far below his usual performance. When I asked Alan about it the next day, he said, "I just don't remember that story like I do the others." He drew for the rest of the term, hanging his finished pictures around my room. He earned a B+, handing in one of the best theme papers in the class. This seemed to support what I had learned from the lists – that students need to find a way to process information that works for them and lets them see what is being taught. It was a place to start.

Part II: Visual Learners in the Classroom.

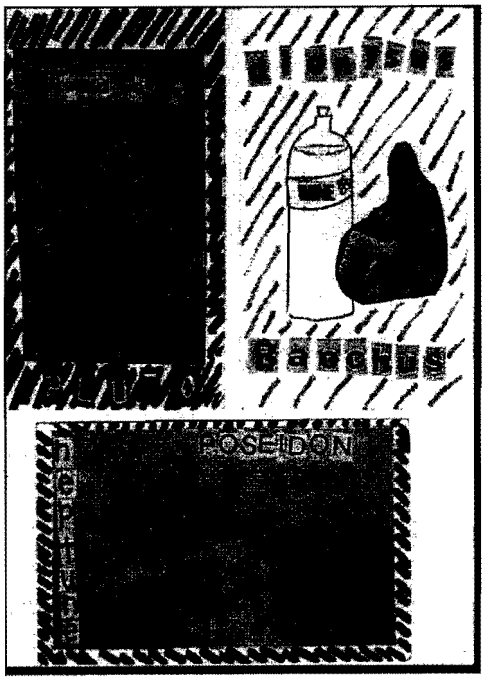
In 1983, Howard Gardner changed the way we viewed learning with his book *Frames of Mind: The Theory of Multiple Intelligences*. Gardner stated that each person's unique learning style allows him or her to excel in different areas. This concept was widely embraced by the educational community, since it seemed to explain why a unilateral teaching approach was not successful for every student.

In the 1990s, further study of the theory of multiple intelligences created a more streamlined approach: the VAK model, which asserts that there are only three basic learning styles: Visual, Auditory, and Kinesthetic. (It is important to note that the VAK model does not overlay Gardner's work, but rather, presents a different way of explaining learning styles.) According to this model, the most prevalent type of learner is visual, making up approximately 65% of the population.

Most people are not exclusively visual, auditory, or kinesthetic learners, but rather a unique mix of the three with one dominant style. If a student's style of learning is almost exclusively visual, however, they are referred to as visual-spatial learners. Because they process the world differently, visual-spatial children are often tested for learning disabilities, and some are classified as ADD or LD. Commonly, they are diagnosed with a central-processing disorder due to the inability to process oral information. The tests show that they are gifted in nonverbal tasks, but their oral memory is considerably below that of their peers. These students are given 504 plans or IEPs to help ease their inclusion into a traditional classroom setting (Vakos).

Dr. Linda Kreger Silverman explains the challenges of working with this type of learner in her book *Upside-Down Brilliance: The Visual-Spatial Learner (2002).* She reminds us that these students internalize information as pictures, and then need to translate that information back into words in order to communicate what they have learned. Information is only retained if it is connected to what they have already learned or their lives. They are non-sequential learners who have a tendency to lose focus during lengthy oral presentations and have a poor auditory short-term memory. Because they understand information through visual cues, visual-spatial learners often are daydreamers or elaborate doodlers. Most importantly, though, visual-spatial learners need to get information down on paper before they can process it, as this is the step that connects what they hear to what they know. The more I read about visual-spatial learners, the more they sounded like the students I was teaching every day. These issues had popped up time and again, and I had assumed that there was nothing I could do about them. I was wrong.

In most secondary classrooms, students are expected to hear the material presented and comprehend or ask questions immediately. Instructions are given orally. Materials are read aloud and then worksheets are distributed. Often, students are called upon to contribute to classroom discussions after the reading has taken place. Sometimes a quiz is given or writing is assigned over what was read. These are standard ways in which secondary teachers assess whether a student understands the material. It was how I was taught. Parents and administrators understand what is going on in that classroom, because they were most likely instructed in this manner as well, but visual-spatial learners have difficulty functioning in this environment.



Since the odds of every classroom changing to accommodate visual learners are slim, it is important that these students discover ways to survive and thrive in the academic world. I contend that these students should not be viewed as disabled; they simply learn differently. It is the responsibility of teachers to prepare their students for other classes and life. We, as educators, must find a way to help visual-spatial learners adapt to their environment by introducing strategies that work and that they can take with them.

Part III: Integrating what I know into what I teach.

I knew that finding ways to accommodate visual learners in my classroom would enhance the learning experience for all students, not just visual-spatial learners, and decided to test my theory in English IA, Greek Mythology. The class is loosely designed around the English 10 class at the traditional high schools in the district and uses the same text. Many of my students had struggled with retention of the stories and the theme paper at the end of the course. They had often complained that the material was dry, and made few, if any, connections between the stories and their lives. It was a class in desperate need of revamping.

I began by revisiting the curriculum. What was it I needed to teach? What were the things I needed to make sure every student in the class learned? The class was designed to give students a foundation in the myths of Ancient Greece and Jungian archetypes. My main goal as an instructor, however, was to help students understand the stories, understand the purpose of mythology, and connect it to themes in their own lives. This was a daunting task. Once I had a clear picture of what I wanted to teach, however, it was easier for me to find visual activities that could address these needs.

Sometimes the adjustments were simple, everyday things like journal topics. The topics were carefully chosen to either reflect on what we had learned or to ask students to form a connection between the world of Greece and their own world. Topics were written on the board when students entered the classroom, and the students were asked to write them in their journals before responding to them. Directions were always given in writing. Venn diagrams and matching activities were given as part of worksheets.

Other strategies involved more planning and revision of teaching materials. Long readings were broken up to write discussion questions on the board. Students were given time to write down responses to these questions before discussion began. They could see their thoughts and have time to arrange them.

The students were beginning to respond. One particular student, Mark* (a pseudonym), had a history of attending my classes during the first three weeks of school and then dropping out for the term. When I asked him why he kept repeating this pattern, he replied, "I don't know. I guess I get tired of being quiet and reading, so I find better things to do." He had already taken Greek Mythology three times and had yet to pass the course. He was the first student to note the changes I was trying. One day he strolled into class and announced, "Something's different." That was all he ever said about the class, but he passed the class that term, and did especially well on the visually oriented assignments. His journal was covered with notes about the discussion questions, and a wild bunch of arrows intertwined between them.

I reworked the questions I had over the readings to focus less on hunt and find answers and more on higher order thinking skills, using words like describe, discuss, predict, and explain. This work over the reading was then distributed before the reading began so that notes could be taken. This was an ideal solution for the visual-spatial learners in the classroom because

> when most learners are asked the answer to a question, they will look for the right answer based on the facts at their disposal. When visual-spatial learners are asked a question, they usually respond with some form of 'tell me more' or 'it depends'. As all their knowledge is connected, they can see many paths to differing answers and want more information to decide which path to take to the required answer (Freed).

Reworking the questions allowed the students to find their own path to the answers.

Another area I reworked was the mid-term report. Traditionally, each student did a research project about one of the Gods or Goddesses of Greek mythology. Many students did poorly on this project, blandly reciting facts and failing to use any voice in their writings. The project was changed so that students were asked to make informative posters and presentations instead. The presentations became a favorite part of the class, as students showed off their posters and delivered speeches, sometimes as the God or Goddess themselves, but always with more passion than had been previously brought to the research project. The posters were then placed around the room to help visualization during readings. Many students have left me their posters so that future students would have examples.

These small changes and new activities, as well as many others, helped with the everyday development of visual learners. The students understood the material and discussions were much more detailed and involved more of the class. I asked myself, though, howthese accommodations helped my visual learners in other classrooms where teachers are unlikely to rework the structure of the class? I needed to find something more. Since the large project for the term was to explore a theme found in numerous myths, I wanted to find a way to get students to make connections between the myths and remember those connections.

One Saturday in June, I observed my husband and brother-in-law watching a Tigers game. The two of them compared the players of today to the ones they knew as children, debating statistics I knew I would never remember. They had spent hours as kids poring over their baseball trading cards, memorizing details and arguing over who was the greatest pitcher of all time. They were invested in those cards and knew every detail about every player. Eureka! I had the answer for my visual learners.

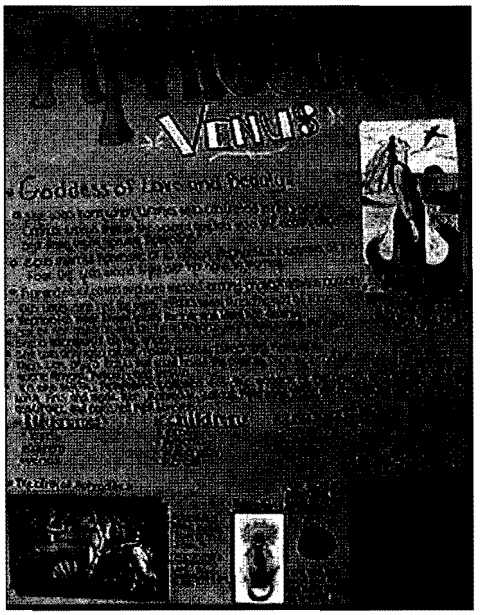
Part IV: Making the Connections

The idea was simple: a project that would continue throughout the term and serve as a connector not only between the stories we read, but also between the text and student lives. The students would create their own set of trading cards, one for each god and goddess we study, as well as the major heroes (Heracles, Perseus, Hector, Achilles, Agamemnon, Odysseus).

This deceptively simple project has multiple purposes. First, students are made responsible for their own learning, and can do it in a style that

reflects them. Next, the students are given a chance to connect the stories they are reading as they are being read. The students are placing the information on cards with visual cues that they design to help retention and recall of information. Lastly, the students decide how to organize the information on the cards to best suit their needs.

During the first week of class, the students in English IA are introduced to the concept of Jungian archetypes. After we discuss the purpose of archetypes, students are asked to identify and label characters that they are familiar with (I like to use *Star Wars* and *The Simpsons*). In small groups, collages or posters are made to represent the different archetypes and then presented to the class. This is a comfortable place to get students thinking about connections between cultures and ages. After this project, I introduce the Greek god and goddess trading card project.



The handout is easily read and includes a picture of both sides of a baseball card. There is a list of the gods, goddesses, and people that need to be done, as well as the specific information required on each card. The students' completed set must contain 21 cards and is due the final week of class. As they read the handout, I pass out blank 3 x 5 index cards and samples of cards that have been gifted to me by previous students. There are many different types: simple ones, elaborate ones, ones that required drawing skill, some that were cut, pasted and colored. All of them had one similarity, though: they met the needs of the student that created them.

The information on the back of a baseball card is very specific and includes batting average, team names, errors, etc. The information on the back of the god and goddess cards is designed a little differently. I ask students for the following things: Greek name and Roman name (must be on both sides of the cards), duties, family members, cities or places sacred to them, archetypes represented, stories or myths associated with them, allies, and enemies. On some cards this information is printed, on others it is typed. This is the side of fact. The other side, however, is where the learner creates a picture to represent the character. Students were cautioned to either write in pencil or gather their information on paper first, as it was likely to be amended or changes throughout the term.

Each time we read, students added a little more to the cards until their information was complete, accurate, and connected to a number of other cards. After a few stories, the students began to make their own notations about the gods and goddesses, and animated discussions began about which goddess was like which movie star, or how it would be so cool to meet a particular hero. At the end of every class, students were drawing or coloring or cutting to get the front of their cards just right. It became a competition. It became a favorite project.

Two sisters in particular latched onto this assignment. The girls were two years apart, but both were in the same section of the class. Each morning they would sneak in before class to show me what they had done to their cards. They had fun with the project and constantly challenged each other. One of the girls' friends made her cards into a book just to keep up with them. The knowledge these students used to improve their cards stuck with them, and all areas of their academic work improved. The sisters earned the two highest grades in the class.

These cards, so simple in design, seemed to help visual-spatial learners to weave the characters together in memory. The non-linear collection of information helped form connections between the stories, but also helped students retain information. A number of students created small collages on the

front of their cards using advertisements and photos of modern items to represent these ancient characters. They became real. Finding a way for the first connections to occur between these students and the literature seemed to open up a world of possibilities and discussion.

The first semester that I introduced the trading cards, the impossible happened in an alternative school classroom: every one of my 19 students passed Greek Mythology. This, of course, is not solely the product of using visual learning techniques such as the cards, but also because of the hard work of every student in the room. The cards were just one of the tools that helped these kids to find success. (It is important to note that not every student in the room was a visual-spatial learner, but each student benefited from the enhanced discussions and projects created by using these strategies.)

On the coattails of the trading cards, I had students respond to the readings in journal form as one of the characters from the story. They were able to crawl inside the world of these people and write through their eyes, often linking the stories back to previous ones and expressing regret, joy, or grief over a series of events. These students were opening up before my eyes, often making connections that were unexpected and wonderful. It was fun to sit back and watch as they grew and bloomed on their own vines.

Part V: Demystifying the process for visual-spatial learners.

Most visual-spatial learners do not realize that there is nothing wrong with the way that they learn, but rather, that they just do it in a different way than the mainstream. When students experience failure, it is easy for them to internalize it and look for reasons that they did not succeed. They begin to question themselves. By the time most students arrive in an alternative high school, they have experienced a large amount of failure, and therefore, self doubt. As educators, it is our job to assess students, but it is our professional responsibility to disassociate blame and failure. We need to delve deeper into *why* a student has failed. Not every student will succeed, but those failures should be a conscious choice on the part of the learner, not because every student wasn't given an equal chance at success.

The very last journal of the term is always the same: What did you learn in this class that you could take with you? The responses are usually quite varied, ranging from "Learning doesn't have to be painful," to "An understanding of why mythology was created," and many others in between. I ask the students to share one of the things with the class. After everyone has shared, I ask the question, "How do you learn?" and the room is always silent for a long time.

If our goal as teachers is to create independent thinkers and learners, it is imperative for each child to understand how they learn and what methods can work best for them. This goal is obvious for alternative educational settings, where educators encourage students who are successful to re-enter traditional high schools. As an educational community, however, we need to realize that children develop better if they understand their own thinking and learning processes.

As a class, we discuss the idea of creating cards for other classes. They are really just index cards, after all, ones that we created to sort information. I tell them that it's okay to put pictures with information to learn it. We talk about making Venn diagrams, webs, and lists, and the fact that those don't have to make sense to anyone else. Make your own connections.

I give my students permission to do what is necessary to help them remember, even if it is drawing or doodling during lectures and readings. I give them permission to write down questions that need answering, even if the discussion has passed. I try to give them something that will help them in the real world – the permission and the means to learn on their own terms.

Works Cited

Freed , J. Teaching Right: Techniques for Visual Spatial Gifted Children. *Understanding Our Gifted*. January/February 1996.

Gardner, Howard. *Frames of Mind: The Theory of Multiple Intelligences*. Basic Books. New York, NY.1983.

Silverman, Linda K. Ph. D. *Upside-Down Brilliance: The Visual-Spatial Learner.* DeLeon Publishing. Denver, CO. 2002.

Vakos, Patricia. *Why the Blank Stare? Strategies for Visual Learners*. Pearson Education website. 2005. http://www.phschool.com/eteach/social_studies/2003_05/essay.html

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